INTELLIGENT TRANSPORTATION SYSTEMS (ITS) IN CENTRAL FLORIDA

## I-4 Surveillance and Motorist Information System(SMIS)

The I-4 Surveillance and Motorist Information System (SMIS) in the Orlando metropolitan area is Florida's largest existing Freeway Management System (FMS). This system was initially installed in 1991 (Phase I) to help support the TravTek ITS Operational Test Project (see description below). The SMIS consists of loop detectors, closed circuit television cameras (CCTV), and changeable message signs along the I-4 corridor. Information to and from the system components is coordinated through a Freeway Management Center (FMC) located at the Florida Highway Patrol (FHP) station in Orlando. This center is electronically linked to the City of Orlando's Traffic Management Center (TMC) in downtown Orlando which coordinates Orlando's traffic signal system. The linkage provides for information sharing and coordination between the city streets and I-4.

System expansion under Phase II was completed in 1995. Phase II expanded the system from its original 11 mile coverage area to approximately 40 miles along I-4; from the Disney vicinity south of Orlando to Lake Monroe on the north side of Orlando. System elements include 22 CMS's, 50 cameras, 70 Vehicle Detection Stations, Fiber Optic trunk line, and a T-l communications ring network.

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## DASH - Daytona, FL

The DASH (Daytona Area Smart Highways) system in Daytona Beach helps manage the traffic challenges associated with massive influxes of visitors during college Spring Break, Speedweeks, and Bike Week. DASH is a freeway surveillance system along I-95 and I-4 within the greater Daytona Beach metropolitan area. DASH is designed to detect accidents or lane blockages on the highways through the use of electronic detection. Once an incident is verified, system operators can quickly notify emergency response personnel while approaching vehicles are warned through Changeable Message Signs. Phase I of the system consists of 10 color CCTV cameras, 4 CMS's, and inductive loop detectors, in the area of the I-4 interchanges with US 92 and I-95. The system complements the 16 surveillance cameras operated by the City along several arterials leading to the beaches. The communications are handled by fiber optic transmission cables and by microwave transmission (for areas on the beach where cabling fiber optic back to the mainland is more expensive).

## Orlando-Orange County Expressway Authority E-Pass Electronic Toll Collection System

The Orlando-Orange County Expressway Authority (OOCEA) implemented the "E-Pass" system on the East-West and Beeline Expressways and portions of the Greeneway Expressway. This system utilizes inductive loop technology to read transponders mounted on the front bumper of participating vehicles. There are over 5000 vehicles equipped with E-Pass transponders.

The system basically works like this; **1)** a transponder mounted on the front bumper of a vehicle communicates via an antenna in the road with a computer in the toll plaza; 2) the computer registers the vehicle and checks how much money is in the account; and 3) upon verification, the gate arm will rise to let the vehicle through. If the account is low on money, a "low balance" light alerts the driver. If there's no money in the account, the gate doesn't rise.

**Florida Turnpike SunPass System**

The Florida Turnpike has plans to implement the "SunPass" system. This will be an electronic toll collection system with vehicle transponders and a central computer to track all transactions. This system also has the potential for use in tracking vehicle movements to determine travel speed and congestion conditions on area highways. The transponders could also be capable of receiving programmed information on traffic conditions.

The first phase of implementation is expected along the southeast Florida corridor from Homestead north to Lantana Road in Palm Beach County. The second priority is in Orlando between the Kissimmee/St. Cloud and Orlando West exit plazas. Eventually, the Florida SunPass System is envisioned to cover the entire Turnpike, making it one of the world's largest AVI/ETTM systems encompassing over 500 toll lanes.

**Lynx Transit Passenger Travel Planning System**

The project will install electronic bus stop displays and a vehicle location system, integrated with an existing signal pre-emption system. The vehicle data will be used to provide next bus information through the electronic bus stop signs and be used to monitor transit fleet performance and improve service. The project is in the initial stages of deployment with help from $240,000 in dedicated FTA Federal Funds.

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**TravTek**

TravTek(Trave1 Technology) provided traffic congestion information, motorists services "Yellow Pages" information, tourist information and route guidance to operators of 100 test vehicles that were equipped with in-vehicle TravTek devices. This operational test project was completed in 1993.

**Orlando ITS Early Deployment Planning Study**

This project will develop an Area wide ITS plan for the Orlando area to improve mobility, safety and productivity on the highway and transit networks. Congestion levels on significant routes in the area will be determined, and short - medium and long-term measurements and ITS strategies will be identified to alleviate congestion.

Status: Underway
Estimated Federal Funds for ITS Components: $400,000 (ITS Dedicated Federal Funds)
Estimated Project Cost for ITS Components: $500,000

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